

REMARKS

This Amendment is responsive to the Office Action dated August 25, 2003. Applicant respectfully requests that the deadline for response be extended by three (3) months to August 25, 2003. Submitted herewith is payment in the amount of \$465.00 for payment of a three month extension of time for a *small* entity.

To facilitate the understanding of the claimed inventions and to expedite the prosecution of the present application, the applicant submits a substitute specification in idiomatic English. A marked up copy of the specification including representative changes is included herewith. The specification was entirely re-written so as to include more idiomatic English. No new matter has been entered.

Claims 1-11 were rejected under 35 USC §112(2) as being indefinite. Reconsideration and withdrawal of this rejection is respectfully submitted.

As the Examiner will note, all pending claims have been canceled and new claims added with define the present inventions with the requisite degree of particularity and specificity to satisfy the requirements of §112(2). Reconsideration and withdrawal of the indefiniteness rejections applied to the claims are, therefore, respectfully requested.

Claims 1-11 were rejected as being anticipated by US patent 3,762,743 to Hawle, by US patent 4,761,024 to Ewen and by US patent 3,999,785 to Blakeley. It is respectfully requested that these rejections not be applied to the newly added claims, for the following reasons.

As the examiner will note, each of the independent claims includes the following recitations:

"including an open and deformable bracelet, the bracelet including a band that is configured to be installed on the saddle hub by rotation, the band defining a plurality of spaced openings to enable the saddle hub to fit pipes of various outer diameters by attachment t the

lateral attachment means of the saddle hub through selected openings in the bracelet"

None of the applied references teaches or suggest this subject matter.

As noted in Col. 2, lines 60-67: "The centrally recessed end portions of the clamping band having two side strips 18 each are wound on said pins. An unintended unwinding or withdrawing of the wound-up end portions of the clamping band from the pins 17 is prevented because the side strips 18 extend into the slots 19 of the pins 17. The number of turns wound on the pins 17 will determine the effective length of the clamping band." See also Fig. 2 of Hawle that illustrates this structure. Hawle does not teach or suggest that the band defines "a plurality of spaced openings to enable the saddle hub to fit pipes of various outer diameters by attachment to the lateral attachment means of the saddle hub through selected openings in the bracelet", as claimed. It is, therefore, respectfully submitted that Hawle does not anticipate the claims presented herewith.

Turning now to Ewen, US patent 4,761,024 discloses a clamp assembly that includes two straps 54, as shown in Figs. 2, 3, 4 and 5 and as disclosed at Col. 3, lines 4 through 48. As clearly shown in Figs. 2 and 3, the straps 54 do not include "a plurality of spaced openings to enable the saddle hub to fit pipes of various outer diameters by attachment to the lateral attachment means of the saddle hub through selected openings in the bracelet", as specifically claimed herein. In fact, Ewen teaches that the straps 54 "passed through their respective brackets 8 and 10, pulled tight and then clamped by the catch members as previously described." This is clearly shown in Figs. 2 and 3. Ewen does not teach the claimed inventions and, in fact, teaches away from the claimed saddle and bracelet having a plurality of spaced openings by teaching that the straps 54 are pulled tight and clamped by clamp members 50. Thus, Ewen does not teach or

suggest the claimed inventions.

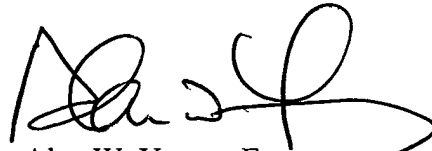
Lastly, Blakeley does not teach or suggest the claimed inventions either. Indeed, US patent 3,999,785 teaches a mechanical pipe outlets that is of the type discussed in the background section of the is of the type discussed in the background section of the present application:

"To adapt to such variations in the outer diameters with this type of attachment, it is necessary to change the ring (assembly of the saddle hub and the rein) to attach the saddle hub on the pipe. On some models of rings, the length of the threaded shaft of the screws and the shape of the saddle hub enable them to adapt themselves to small variations in the outer diameters of the pipes by more or less tightening the screws."

Indeed, Blakeley relies on two sections 11 and 12 that are bolted together. See Column 3, beginning at line 31 and see also Fig. 8, which clearly shows the two rigid sections being fitted onto the pipe. Blakeley does not teach or suggest a bracelet having a band that defines "a plurality of spaced openings to enable the saddle hub to fit pipes of various outer diameters by attachment to the lateral attachment means of the saddle hub through selected openings in the bracelet", as claimed in each independent claim of the present application. As the Blakeley reference does not teach this expressly claimed feature of the present invention, it is respectfully submitted that it does not anticipate any of the new claims submitted herewith.

It is believed, therefore, that the present application is now in condition for allowance and an early passage to issue. In the event that there remains any questions relating to this response or to the application in general, it would be appreciated if the Examiner would telephone the undersigned attorney concerning such questions and whatever is needed will be done immediately.

Respectfully submitted,
YOUNG LAW FIRM, P.C.

A handwritten signature in black ink, appearing to read 'Alan W. Young', with a large, stylized flourish extending from the end of the signature.

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APPENDIX B
Marked Up Copy of Originally Filed Specification

Device And Method For Mounting A Saddle Hub On A Pipe And Corresponding Tap

The present invention concerns the mounting of a by-pass saddle on a pipe, particularly a pipe of supplier water or other fluid liquid or gas. First, the invention ^{relates} ~~is~~ relative to a device of assembly of a saddle comprising two side means of fixation.

Often the known saddles are tap saddles of by pass or closing systems for a pipe, provided with two side means of fixation arranged ^{substantially opposite to} ~~appreciably in contrast~~ one of the another ~~one~~ so as to be able to tighten the saddle on the pipe with an ~~appreciably~~ ^{substantially} homogeneous pressure on all the surface of support of the saddle. The joining of the saddle and the ^{tightening} ~~means~~ ^{of stress} forms a ring.

Traditionally, the means of fixation are constituted of screws and nuts which tighten the saddle on the pipe through a rein. For the same internal nominal diameter, the outside diameter varies according to the building material, cast iron, steel, cement, plastic materials, etc. To adapt itself to these variations of outside diameters with this type of fixation, it is necessary to change ^{the} ring joining the saddle to the rein for fixing the saddle to the pipe. On some models of rings, the length the thread ^{shank} ~~shank~~ of the screw and the shape of the ring allow by screwing more or less to adapt it to small variations of outside diameters of pipes. So, the known rings are constituted of two half-portions, two screws and two nuts or two tapped holes.

The known saddles present the major inconvenience ^{of requiring changing the} ~~to require to change of~~ rein and saddle to adapt ^{themselves} ~~itself~~ to great variations of outside diameters of pipe corresponding to different nominal diameters. Every nominal diameter of pipe requires generally at least a different ring, even though the rings are if the same type. The multitude of rings presents the inconvenience ^{of having to} ~~to constrain to~~ increase stocks to ^{fit} ~~adapt itself to~~ various pipes.

Furthermore, for the ^{large} ~~great~~ diameters, particularly ^{greater than} ~~superiors to~~ 200 mm, the known reins are heavy and cumbersome, ^{making} ~~that makes difficult~~ the mounting and the fixation of the saddle around the pipe ^{difficult} in an opened trench. So the work of fitting of saddles with reins known on ^{pipes of} ~~great~~ diameters is long and tiring.

Invention mainly aims to allow in a simple and fast way the connection of a by pass pipe on a full or empty pipe transporting a fluid with ^{high} an important pressure. This without ^{a couple} important stock of parts.

For that purpose, the invention has for object a device ^{mounting} [of mounting] of the aforesaid type, in which the ^{tightening} means of stressing ^{is} being an opened ^{bracelet} [bracelet] and deformable, the saddle and the bracelet forming a ring; the bracelet includes at least three means of fixation are arranged regularly ^{from one} [of an extremity to the another] ^{extremity} of said bracelet so as to adapt itself to the various outside diameters of pipe by the connecting and the ^{tightening} stressing of at least two means of fixation of the bracelet to the means of fixation of the saddle

10 More specifically, the means of fixation of the bracelet are or include openings being able to let go and lock a part of the means of fixation of the saddle. Openings are arranged ^{pass} [bit by bit] ^{stepwise} from an extremity to another of the bracelet. The disposal ^{stepwise} [bit by bit] of the openings allows ^{the} to cut in length the bracelet ^{to be cut according to} following the diameter of the pipe.

According to ^{other} [another] characteristics and so that the ^{tightening} stressing does not require more than a single tool particularly a flat wrench or in ^{socket wrench} spanner, the bracelet is mounted by ^{rotation} ~~rotation~~ on the saddle, mounting ^{that} such as a pulled down locked an extremity of the bracelet around a T part ^{constitutes} one of the means of fixation of the saddle, an opening of the bracelet ^{being arranged} ~~arranging itself~~ at the extremity of the pulling down to allow the passage of the part of connecting of the T of the saddle; the bracelet is provided with a means of reversible ^{attaching} ~~fixation~~ such as one screw crossing another opening placed in its second extremity, said screw ^{attaching} ~~having to fix~~ the second extremity of the bracelet to the second ^{attaching} ~~means of fixation~~ of the saddle.

20 [Pulling] ^{pull} downs locked ^{at the} of extremity of the bracelet ^{are} [is] arranged on the face of the bracelet intended to be tightened on the pipe so as to pinch at least a ^{one pull} pulling down portion between said pipe and the outside edges of the bracelet.

With the aim of obtaining after preparation a ring forming only a single ^{ONE-piece} ONE-piece assembling ^{monoblock} ~~monoblock~~, the second extremity of the bracelet according to the invention is pulled down ^{in a couple} closed around a part of mobile ^{retaining portion} ~~locking of leaky~~ and tapped cylindrical shape forming a sliding ^{be mounted} ~~and turning nut~~ in the pulling down of the extremity of said bracelet.
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pipes, the saddle

Openings

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that may be cut to a length that enables it to encircle the pipe.

such as a composition based of powder of epoxy. The band of the bracelet can also be realized in plastic making material.

This coating rustproof strip resists very well to any chemical corrosion with pipe with ferrous base. *This coated rustproof band stands up well to and washer*

5 The Saddle, ring, screw, ~~slice~~ *they are fitted* and nut resist to the air corrosion that they undergo during the stocking before ~~the fitting~~ *they are fitted* on the pipe. This ring resist to more one thousand hours in salt fog without any corrosion.

10 Invention ~~still~~ *also* has for object a method for mounting of a device ~~of~~ *for the* connection of an auxiliary pipe ~~or by pass~~ *by pass* on a load or not supply water pipe, characterized in that said pipe having so well diameter, lower than the distance separating the two side means of fixation of the saddle, greatly equal to the distance separating the two side means of fixation of the saddle that upper than the distance separating the two side means of fixation of the saddle, ~~it includes~~ *the method including steps* at least the following successive stages:

15 - preparation of a ring such as ~~above~~ *the* defined, bracelet being ~~put in length~~ *dimensioned* according to the diameter of the pipe,

- presentation and shaping of the ring on the pipe,
tightening of the assembly in its operating position
 - stressing of the set in position of functioning,

20 *disposing assembly in a waterproof manner*
 - screwing and stressing of the device of connection on the saddle,
 - waterproof assembly of a device to drill ~~outing~~ *equipped with* of a bit on ~~the~~ *the* upper opening of the hollow of the device of connection,

- drilling of the pipe,

- dismantling ~~of the device to drill,~~

- lock of the device ~~of connection,~~ *inf*

- connecting the system of ~~by pass~~ *by pass* to the auxiliary pipe.

25 Invention also has for object a tap ~~of by pass~~ *a pipe by pass faucet or tap* of pipe including a body and ~~one~~ *implemented and for* a saddle, the body and the saddle being realized in a single set monoblock and / or in one piece and comprising at least two side means of fixation, the means of fixation being *single piece*

attaching means attaching


by disposed relative
 radial nerves with regard to the axis of the body of the tap, ~~placing itself~~ ^{being disposed opposite} greatly in contrast ~~one of the another~~ one and being provided with a device for mounting on the pipe, characterized in that said device is such as described ~~this~~ ^{above}.

5 A not restrictive example of the invention ^{will} is now ~~going to be~~ ^{w/ ref} described ~~compared~~ to drawings annexed ^{the} on which:

- Fig. 1 represents in vertical sectional schematic view a ring, corresponding to the invention, ^{attached} ~~fixed~~ to pipes of three different ^{outer} ~~outside~~ diameters;

- Fig. 2 represent a saddle ^{according} ~~corresponding~~ to the invention in top plan view, with its ring on the pipe;

10 - Fig. 3 ^{is} ~~are~~ a rustproof strip, detail of an opened ring of the shape ^{band} ~~corresponding~~ according to the invention;

 - Fig. 4 represent in schematic view a connection by means of a tap of branching of load pipe with a device corresponding to the invention.

- Fig. 5 represent a ring joint according to the invention in ^h Half-sectional view.

15 The ring 1 fitted on pipe 2a, 2b, 2c of various ^{outer} ~~outside~~ diameters ^{shown in} ~~represented to~~

Fig. 1 comprises a saddle 3, a rustproof metal metallic band 4 forming ^{an} ~~opened ring~~ and deformable ^{ring tightening}. A binding screw 5 fixed to a cylindrical nut 7 bound to the metallic band 4 ^{revolves} ~~revolves~~ by the intermediary of a sleeve 6 in shape of half-sphere. The saddle 3 includes an axial pipe 8 provided with an intermediate muff 9 ^{sleeve adjacent} ~~neighboring~~ to two joints 10, 11. A tap 12 ^{tubulure opening?} ~~of taking in charge~~ of the fluid circulating in the pipe 2a, 2b, 2c is screwed on the saddle 3 by means of its thread extremity 13.

20 The saddle 3 comprises two ^{lateral} ~~side~~ means of fixation 14, 15, the means 15 of fixation 14 is a T of ^{whose} ~~which~~ cylindrical extremity 16 presents a parallel axis to the axis of the pipe. The other ^{lateral attachment} ~~side~~ means of fixation 15 is placed ^{attachment} ~~at the~~ opposite of the means of fixation 14. An ^{global} ~~extremity~~ 17 of the metallic band 4 is pulled down locked around the extremity 16 of the T of the saddle 3, the other ^{end} ~~extremity~~ of the strip 18 is pulled down locked on the cylindrical nut 7. The screwing of screw ^{the} ~~5~~ in the nut 7 maintains the ring ^{tight} ~~stressed~~ on the pipe. If pipe 2a is of small diameter, screw 5 ^{tightened} ~~is pulled down towards the~~

tubular
 defines a axis rel to
 axis of the pipe 8. The pipe 8 is of axis radial nerve by report has the axis of the pipe, a
 lower flat 19 of the pipe facilitates the fitting of the lower joint 10 ^{compressed} in the flat 19
 between the ^{portion} muff 9 and the surface of the pipe 2a. The lower joint 10 maintains
 waterproofness between pipe 2a and the ^{sleeve} muff 9. If the saddle 3 is ^{allied} fixed to a pipe 2 b of
 5 average ^{outer} outside diameter, screw 5 revolves on the ^{washer} slice in shape of half-sphere 6 and is
 more opened than for a fixation of the saddle 3 on a pipe 2a of small diameter. The lower
 joint 10 ^{conforming to} marries the surface of the pipe 2b. ^{Even though the outer} Although pipe 2b of upper outside diameter
^{than that} has that of the pipe 2a ^{sinks} prints less profoundly into the pipe 8, waterproofness between pipe
 2b and the muff 9 is maintained by a stronger ^{tightening} stressing of the tap on the saddle. This
 10 ^{tightening} stressing ^{sleeve} pulls the compression of the muff 9 on the joint 10. Where ^{thereby a} from waterproofness
 between the muff 9, the joint 10 and pipe 2b. In case the saddle 3 is fixed to a pipe of
^{large} great diameter 2c, screw 4 revolves more and the tap is tightened more ^{so as} in a way
^{sleeve} to urge the muff 9 on the lower joint 10 ^{a waterproof seal} to obtain waterproofness ^{seal is maintained} enter the joint 10
 and the muff 9.

15 The saddle 3 is always maintained tightened on the pipe 2c and the lower joint 10
 maintains also ^{a waterproof seal} waterproofness between the pipe 2c and the ^{sleeve} muff 9. The tap 12 is screwed
 in the pipe 8 with the threading 20. The tap 12 ^{compresses} looks the upper joint 11 on the ^{sleeve} muff 9 and
 is locked by ^{a blocking} one screw ^{sleeve} 21. The upper joint 11 maintains waterproofness
 between the tap 12 and the ^{sleeve} muff 9.

20 As shown more particularly Fig. 2, the means of ⁱⁿ fixation 15 of the saddle 3 is
 constituted of two fingers which constitute a fork. The ^{attaching} stem of screw 5 ^{shaft} going by the
 groove 22 formed between the two fingers of the fork 15.

25 The lateral opening of this groove allows the rotation and the passage of the
^{of shaft from} thread ^{engaged} stem of even screw which is already ^{washer} fixed in the cylindrical nut. 7. A spherical
 hollow imprint arranged in the hollow of the fork 15 forms the flat of the ^{high traction} slice 6 by
 allowing it to have a function of kneecap while obtaining an ^{the} important leading of screw 5.
 The ^{end} extremity of the saddle ^{having the fork shape is} in shape of fork 15 allows a fast mounting without having to
 remove screw ^{the} with its cylindrical nut, so avoid the loss of any part, ^{as to} of the part-ring
 assembly being monoblock ^{a single piece} before the moment of ^{at} the mounting.

Two tapped drillings are arranged radically ^{relative to} in the pipe 8 in the top of the saddle 3. These drillings receive ^{a locking} one screw of locking-21 that prevents the loosening of the tap 12 with ^{respect} regard to the saddle 3 during the operations of the tap 12.

The ^{band including manipulation} strip 4 presents an extremity in another one, the openings 24 arranged bit by bit as represented on Fig. 3. These openings 24 are elongated and arranged longitudinally with regard to the length the strip 4. These forms and capacities of openings 24 allow to thread the extremity 17 of the strip on the T 14 and to fix it by rotation and pulling down. These openings allow also the passage of the stem of screw 5 since the cylindrical nut 7 in the direction of the saddle 3 and of extremity of the stem which overtakes of the cylindrical nut 7.

^{According to another embodiment,}
In variant some openings can not be elongated.

Fig. 4 shows a connection on a full pipe of one tap of by pass with valve of the type with vertical axis of operation 12. The elements of the device of fixation are tracked ^{of the need not} down by the same digital references that elements corresponding of the device of fixation represented on Figs 1 - 3. The pipe of entrance 8 is fixed in a way seal on the pipe 2 by stressing of the bracket 4 on the side means of fixation 14, 15 of the ring 1. The pipe 8 results in a opened chamber 26 in the upper part of the body of tap 25. Partially high the opened chamber 26 results in two pipes, a lateral pipe 27 and a vertical pipe 28.

A machine to drill 29 is mounted on the body 25 in the axis of the pipe 28 of the opened chamber 26 and the pipe 8. A shutter 30 is mounted on the tap 12 towards the lateral pipe 27. The shutter is constituted of one screw 31 leaded in a sheath 32 the screw moving a head of closing 33 that can go into the sheath 32 prolonged by an cross-piece 34. The head of closing can also go out of the sheath 30 to fill in a way seal the high part of the opened chamber 26.

The ^{band} Attachment ^{band} and the connection according to the invention of a tap of connecting a full pipe are made in the following way, a strip 4 drilled bit by bit of elongated openings is cut in the length foreseen to correspond to the outside diameter of the pipe water conveyance. The strip is coated in a making material constituted in base of powder of epoxy, that rounds off the sharp edges of edges. An extremity of the strip 4 is introduced

strip → band glasse

into the P 14 by an elongated opening ^{from} by leaving of the end of the strip 4. A rotation locks the strip on the T 14. The cylindrical nut 7 is placed ^{at} in the other extremity of the strip 4. Two extremities are pulled down closed, an elongated opening establishing an opening ^{with each end the} towards every extremity. Screw 5 comes to lock the nut 7 by way of the second opening by leaving of the end of the strip 4, second opening which forms the opening of extremity with the pulling down of the edge of the extremity 18 of the strip. The saddle 3, the strip 4 forming bracelet and screw 5 form only a single assembly ring the bracelet which is able to revolve with regard to the saddle 3 on the cylindrical part of the T 16.

A single person ^{is sufficient} to place the ring 1 on the pipe 2, to close the bracelet around the pipe, to place and to screw 5 in the groove 22 that tightens and immobilizes the ring on the pipe 2. The tap 12 is screwed on the saddle 3 in the variant where the saddle 3 and the tap 12 are constituted of different parts. The machine to drill 29 and the shutter 30 are mounted on the tap 12. Then pipe 2 is drilled, then the bit of the machine to drill 29 ^{is brought} went back up. Suck it of closing 33 is moved and maintains the waterproofness of the high part of the opened chamber 26. The machine to drill 29 is unsettled. A cork comes to close the pipe 28. The head of closing is put off and the lock of the tap 12 allows the unsettling of the shutter, followed from the connecting of the main pipe 2a, 2b, 2c in an auxiliary pipe of by pass.

In variant, the saddle 3 and the body 25 of the tap 12 of by pass pipe in function are realized in a single assembly ring presenting a pipe of entrance capable of being fixed in a way seal on the pipe 2a, 2b, 2c, the said pipe of entrance resulting to a opened chamber containing in its top a pipe of lateral exit 27, the opened chamber 26 presenting a vertical upper pipe 28 ^{to be filled} receiving in a way seats a machine to drill 29.

According to another variant of realization waterproofness between the ring and pipe 2 is maintained by a one part joint with lips such as represented on Fig. 5. The lower surface 35 of the joint is concave with a curve of at least equal to the curve of the pipe 2. The peripheral part 36 presents an edge 37 separating it in at least two faces 38, 39. The upper surface 40 of the joint is confused with a line of curvature giving it a convex aspect. Peripheral and superior faces 38, 39, 40 of the joint with lips come to find

- w/ in an ~~accommodation in the foreseen~~ ^{presence in} imprint under the sole of the saddle 3. The internal ~~part~~ ^{portion} ~~that delimits~~ ^{gasket} 41 bounding the hollow of the said joint presents an opened ~~re-entrant~~ ^{re-entrant} angle separating at least two ~~faces~~ ^{surfaces} 42, 43 of different ~~hillsides~~ ^{surfaces}. The upper inside 42 having an orientation ~~toward the top and the bottom~~ ^{toward the bottom and} upward and the lower inside 43 having an orientation ~~downward~~ ^{downward} the pressure of the fluid ~~components~~ ^{components}.
- 5 P1 going in the hollow of the joint with lips decomposes into two constituents, P2 upward ~~toward the top of~~ ^{toward the top of} in direction to the imprint and another P3 toward the surface of the pipe 2 by way of the ~~ext. surface~~ ^{ext. surface} of the joint. The said joint is capable of maintaining waterproofness with the ~~pipe 2a, 2b, 2c of various diameters by variation in intensity and place of the pressure~~ ^{the pipe 2a, 2b, 2c of various diameters by variation in intensity and place of the pressure} and the compression on the pipe 2a, 2b, 2c about its diameter.
- 10 Although invention ~~was~~ ^{has been} described in regard with very particular structures, it is not ~~limited to it~~ ^{is not limited to it} and it can be brought to this different variants, as for example combinations of ~~different realizations represented on drawings or above described, without going out of the invention.~~ ^{for ex. diff. comb. of the sub resp. in the design or des. herein above}
- 15 ~~The ref. inv. wanted after the~~ ^{The ref. inv. wanted after the} ~~Inserted reference signs after technical characteristics mentioned in claims have~~ ^{Inserted reference signs after technical characteristics mentioned in claims have} ~~for only purpose to facilitate the understanding of these last ones and do not there limit at all the reach.~~ ^{the sole of facilitating the obs. and not no way limit the scope thereof.}